

HEADER, 2.0MM PITCH, RECEPTACLE

1. INTRODUCTION

1.1. Purpose

Testing was performed on the **HEADER, 2.0MM PITCH, RECEPTACLE** to determine its conformance to the requirements of Product Specification 108-57524 Rev O.

1.2. Scope

This report covers the electrical, mechanical, and environmental performance of **HEADER, 2.0MM PITCH, RECEPTACLE** manufactured by the Global Personal Computer Division.

1.3. Conclusion

HEADER, 2.0MM PITCH, RECEPTACLE connector meets the electrical, mechanical, and environmental performance requirements of Product Specification 108-57524 Rev O.

1.4. Product Description

HEADER, 2.0MM PITCH, RECEPTACLE is designed for printed circuit board applications. The contacts are copper alloy, Tin or Tin-lead plated on the contact interface and nickel plating on the soldertail, all over nickel under-plated. The housing material is glass filled insulating polymer, UL 94V-0.

1.5. Test Samples

The test samples were randomly selected from normal current production lots, and the following part numbers were used for test:

| Test Group | Quantity | Description |
|---------------------------|----------|--|
| A, B, C, D, E, F, G, H, I | 2 ea. | HEADER, 2.0MM PITCH, RECEPTACLE |

| DR | DATE | APVD | DATE |
|----------|-------------|------------|--------------|
| Oblic Hu | 24-Feb-2005 | Wei-Jer Ke | 24-Feb-2005 |
| | | | FZ00-0034-05 |

1.6. Qualification Test Sequence

| Test or Examination | Test Group | | | | | | | | |
|---------------------------------|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| | A | B | C | D | E | F | G | H | I |
| | Test Sequence (a) | | | | | | | | |
| Examination of Product | 1,5 | 1,3 | 1,5 | 1,5 | 1,5 | 1,7 | 1,5 | 1,3 | 1,3 |
| Contact Resistance | | | 2,4 | 2,4 | 2,4 | | 2,4 | | |
| Insulation Resistance | | | | | | 2,5 | | | |
| Dielectric Withstanding Voltage | | | | | | 3,6 | | | |
| Insertion Force | 2 | | | | | | | | |
| Withdrawal Force | 3 | | | | | | | | |
| Durability | 4 | | | | | | | | |
| Contact Retention Force | | 2 | | | | | | | |
| Vibration | | | 3 | | | | | | |
| Humidity-Cycling Test | | | | 3 | | | | | |
| Salt Spray | | | | | 3 | | | | |
| Thermal Shock | | | | | | 4 | | | |
| Temperature Life | | | | | | | 3 | | |
| Solder ability | | | | | | | | 2 | |
| Resistance to soldering heat | | | | | | | | | 2 |

Figure 1.

NOTE: (a) The numbers indicate sequence in which tests were performed.

2. TEST RESULT

| GP | TEST | SPEC | DATA | | | |
|----|----------------------------------|---------------------------|---------|----------|---------|---------|
| | | | Mean | σ | Max. | Min. |
| A | Contact Resistance | 20 mΩ max | 8.20mΩ | -- | 8.87mΩ | 7.53mΩ |
| | Insertion Force | 200g Max. per pin. | 102g | -- | 118g | 86g |
| | Withdrawal Force | 20g Min. per pin. | 52.5g | -- | 57g | 48g |
| | Durability | No Damage | OK | -- | OK | OK |
| | Contact Resistance | 30 mΩ max | 10.03mΩ | -- | 10.42mΩ | 9.64mΩ |
| | Appearance | No Damage | OK | -- | OK | OK |
| B | Contact Retention Force | 350 grams min per contact | 589g | -- | 685g | 494g |
| | Appearance | No Damage | OK | -- | OK | OK |
| C | Contact Resistance | 20 mΩ max | 7.81mΩ | -- | 8.77mΩ | 6.85mΩ |
| | Vibration | 10-55Hz, 2 hours / 3 axis | OK | -- | OK | OK |
| | Contact Resistance | 30 mΩ max | 8.22mΩ | -- | 8.96mΩ | 7.48mΩ |
| | Appearance | No Damage | OK | -- | OK | OK |
| | Contact Resistance | 20 mΩ max. | 8.45mΩ | -- | 9.04mΩ | 7.85mΩ |
| D | Humidity-Cycling Test | 90~95%, 40±2°C for 96hr | OK | -- | OK | OK |
| | Contact Resistance | 30 mΩ max. | 9.53mΩ | -- | 10.81mΩ | 8.25mΩ |
| | Appearance | No Damage | OK | -- | OK | OK |
| | Contact Resistance | 20 mΩ max. | 8.64mΩ | -- | 9.41mΩ | 7.52mΩ |
| E | Salt Spray | 35 ± 2°C, 5%, 24hours | OK | -- | OK | OK |
| | Contact Resistance | 30 mΩ max. | 8.86mΩ | -- | 9.10mΩ | 8.63mΩ |
| | Appearance | No Damage | OK | -- | OK | OK |
| | Insulation Resistance | 5000MΩ min. | 131 TΩ | -- | 141 TΩ | 121 TΩ |
| F | Dielectric Withstanding Voltage | 500 VAC for 1Minute | 0.01mA | -- | 0.01mA | 0.01mA |
| | Thermal Shock | -55°C/+85°C, 5 cycles | OK | -- | OK | OK |
| | Insulation Resistance | 5000MΩ min. | 181 TΩ | -- | 196 TΩ | 166 TΩ |
| | Dielectric Withstanding Voltage | 500 VAC for 1Minute | 0.01 mA | -- | 0.01 mA | 0.01 mA |
| | Appearance | No Damage | OK | -- | OK | OK |
| | Contact Resistance | 20 mΩ max. | 8.95mΩ | -- | 10.08mΩ | 7.82mΩ |
| G | Temperature Life | 105°C ± 2°C , 250 hours | OK | -- | OK | OK |
| | Contact Resistance | 30mΩ max. | 8.78mΩ | -- | 9.51mΩ | 8.05mΩ |
| | Appearance | No Damage | OK | -- | OK | OK |
| | Solderability | 95% min. | OK | -- | OK | OK |
| H | Appearance | No Damage | OK | -- | OK | OK |
| | Resistance to Reflow solder heat | 10sec, 240°C | OK | -- | OK | OK |
| I | Appearance | No Damage | OK | -- | OK | OK |

Figure 2